

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

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1. (currently amended): A control apparatus for controlling a device-under-control, the control apparatus comprising:

a display part operable to display an output frequency and a frequency setting value;

a key group operable to select at least one mode from a plurality of operation modes;

a manual-pulse generator operable to generate one or more command pulses;

pulse input means for receiving the command pulses outputted from said manual pulse generator and calculating an amount of change in the received command pulses per unit time; and

control panel control means for calculating the output frequency based on the amount of change in the command pulses per unit time outputted from said pulse input means.

2. (previously presented): A control apparatus as defined in claim 1, wherein the operation modes comprise at least a setting mode in which the frequency setting value can be changed and wherein further, said control panel control means is operable to perform setting operations when data is outputted from said pulse input means even when the selected operation mode is a mode other than the setting mode.

3. (previously presented): A control apparatus as defined in claim 1, wherein said control panel control means is operable to change a scaling factor of an amount of change of the frequency setting value to the amount of change in the command pulses in response to the amount of change in the command pulses per unit time.

4. (previously presented): A control apparatus as defined in claim 3, wherein the scaling factor is held constant for a fixed period of time after operation of said manual pulse generator is stopped.

5. (previously presented): A control apparatus as defined in claim 1, wherein a setting value is set by operating said manual pulse generator after a set key has been selected on said key group.

6. (currently amended): A control device for controlling a frequency property of a device under control, the control device comprising:

an operating component operable to display operational properties of the device under control, input control parameters, and output property control signals, wherein said operating component comprises a manual pulse generator operable to generate a control pulse signal comprising pulses with a frequency determined by a rotation amount of the manual pulse generator; and,

a control circuit operable to receive the property control signals and generate frequency property control signals based thereon for controlling the frequency property of the device under

control and output display signals to said operating component, wherein said control circuit comprises a pulse input device operable to receive the control pulse signal and determine a change in the frequency of the pulses.

7. (previously presented): A control device as set forth in claim 6, wherein the change in frequency of the pulses of the control pulse signal is used to generate the frequency property control signals.

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8. (previously presented): A method of controlling a frequency set value of a device under control, the method comprising:

- a. determining an operation mode;
- b. determining whether a pulse generator is generating pulses;
- c. if it is determined in (a) that the operation mode is monitor mode and it is determined in (b) that the pulse generator is generating pulses, modifying the operation mode to be frequency setting mode;
- d. determining a change in frequency with respect to the pulses;
- e. modifying the frequency set value for the device under control based on the change in frequency.

9. (previously presented): A method as set forth in claim 8, further comprising:

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f. if it is determined in (a) that the operation mode is frequency setting mode and it is determined in (b) that the pulse generator is not generating pulses, determining whether a predetermined amount of time has elapsed since the pulse generator stopped generating pulses.

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10. (previously presented): A method as set forth in claim 9, further comprising:

g. if it is determined in (f) that the predetermined amount of time has elapsed, modifying the operation mode to monitor mode.

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11. (new): A control apparatus for variably controlling the speed of a device-under-control, the control apparatus comprising:

a manually controlled pulse generator operable to generate one or more command pulses;

a pulse input circuit operable to receive the command pulses outputted from said manually controlled pulse generator and determine an amount of change in the frequency of the received command pulses; and

a control circuit operable to control the speed of the device under control based on the amount of change in the frequency of the command pulses.

12. (new): A control apparatus as claimed in claim 11 wherein the amount of change in the frequency of the received command pulses is dependent on a speed by which said manually controlled pulse generator is manually rotated.